UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,721	05/08/2001	Suresh Singamsetty Kumar	004939.P006	3643

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EXAMINER
CAO, DIEM K

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/851,721	KUMAR ET AL.
Office Action Summary	Examiner	Art Unit	
	Diem K. Cao	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*12 April 2005*</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-20 are pending. Applicant has amended claims 1-2, 5-8, 11-13, 16-18.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 4/12/2005 has been entered.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

4.   Claims 2-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention.

        Claims 2, 6, 11 and 16 recite the limitation "the event information comprises the state

associated with the task", or "the messages contain event information comprising a present state

associated with the task" which is not supported in the specification. The specification seems to

disclose using the thread name (page 22, lines 1-3 and page 23, lines 13-18) and lookup tables (a

thread attribute table, a task status table, and a preempted thread table; page 23, lines 8-11)

during message passing, wherein a previous state is provided to FSM (page 27, lines 4-5), not

from the message itself.

Examiner examines the case as best understood based on the specification.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsley (U.S.

6,430,593 B1) in view of Pai et al. (Flash: An efficient and portable Web server) further in view

of Cohen et al. (Win32 Multithreaded Programming).

7.   As to claim 1, Lindsley teaches a finite state machine operating within a multitasking

environment (internal State Machine 41, the TSA; col. 9, lines 21-23), a plurality of tasks

configured to pass event information associated with the tasks in message to the finite state

machine (The TSA accepts commands from tasks; col. 6, lines 47-48 and col. 14, lines 57-67),

wherein the finite state machine changes a state associated with the task based on the event

information (col. 15, lines 1-6 and col. 19, lines 32-48).

8.   However, Lindsley does not teach a portable thread environment, a plurality of threads

operable to cooperatively complete a task. Pai teaches a portable thread environment (portable

Web server; page 1, right column, 4 paragraph). Cohen teaches the advantage and well-known of

multithreaded programming (pages 2-3).

9.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teaching of Lindsley, Pai and Cohen because portable thread

environment will improve the performance of Lindsley's system by combining the high

performance of single-process event-driven servers on cached workloads with the performance

of multi-process and multi-threaded servers on disk-bound workloads (abstract).

10.   As to claim 2, Lindsley as modified teaches the event information comprises one or more

events passed to a thread (task command; col. 14, lines 57-67).

11.   As to claim 3, Lindsley teaches a message interpreter configured to accept the messages

(ATCI 45 and STCI 46; Fig. 1 and associated text), wherein the interpreter maps the messages to

actions using the look-up table (col. 18, lines 29-40).

12.   Claims 4-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsley

(U.S. 6,430,593 B1) in view of Pai et al. (Flash: An efficient and portable Web server) and

Cohen et al. (Win32 Multithreaded Programming) further in view of Allen (U.S. 5,727,214).

13.   As to claim 4, Lindsley does not teach the finite state machine further comprises a storage

device for storing the one or more action. Allen teaches the finite state machine further

comprises a storage device for storing the one or more action (every port is endowed with a set

of disposition ... events; col. 11, lines 31-41 and a Disposition Rank Matrix 200; col. 12, lines 7-

11). It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the teaching of Lindsley and Allen because it provides a method for receiving

and processing event messages directed to an object or system that incorporates a specified state

chart (col. 1, lines 14-17)

14.   As to claim 5, Allen teaches the finite state machine further comprises a state changer

configured to change the state associated with the task based upon event information and a

previous state associated with the task (Accept_event() ... cursor state machine 126; col. 9, lines

30-33 and Figs. 7A-7B).

15.   As to claim 6, see rejections of claims 1, 2 and 5 above.

16.   As to claim 7, Lindsley as modified teaches the task remains associated with the present

state based upon the present state and the action (col. 15, lines 1-6).

17.   As to claim 8, Lindsley as modified teaches generating state machine events relating to

the state of the task (col. 14, lines 57-67).

18.   As to claim 9, Allen as modified teaches distributing the state machine events between one or more threads in the portable thread environment (to itself or to another object; col. 10, lines 40-44).

19.   As to claim 10, Allen as modified teaches distributing the state machine events between one or more threads in the portable thread environment and a second portable thread environment (it can also calls to new_event() to submit additional events to itself or to another object; col. 10, lines 27-44 and Jam_event; col. 9, lines 48-52 and Band State Machine; col. 7, lines 6 -33).

20.   As to system and computer product claims 11 and 16, they correspond to the method claim of claim 6, respectively.

21.   As to claims 12 and 17, see rejection of claim 7 above.

22.   As to claims 13 and 18, see rejection of claim 8 above.

23.   As to claims 14 and 19, see rejection of claim 9 above.

24.   As to claims 15 and 20, see rejection of claim 10 above.

Response to Arguments

25.   Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K. Cao whose telephone number is (571) 272-3760. The examiner can normally be reached on Monday - Friday, 5:30AM - 1:00PM and Saturday, 5:30AM – 10:30AM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

Due to the realignment of WG 2120, effective March 20, 2005, AU 2126 will become

AU 2194.

Diem Cao

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